

CLAIMS

1. A connection device for flex circuit (12), comprising a support (16), means (18) for positioning flex circuit (12) relative to said support (16) and conformation means (20) for flex circuit (12), characterized in that the support has a bottom (44, 90) at the level of which is created an opening (46, 96), flex circuit (12) being immobilized between conformation means (20) and bottom (44, 90), conformation means (20) having at least one bent spring strip (24) comprising at least one bend (26) positioned between flex circuit (12) and a surface (28) so as to increase the elastic effect of said strip (24).
2. The connection device according to claim 1, further characterized in that means (18) for positioning flex circuit (12) relative to support (16) comprises projections (32) downstream of the contact zone, in the plugging-in direction, which projections can be housed in corresponding openings (34) created in flex circuit (12).
3. The connection device according to claim 2, further characterized in that openings (34) created in flex circuit (12) have an oblong form and are arranged parallel to the flex circuit conductors, at the level of the gaps, so as to perfectly immobilize the flex circuit in the transverse direction and permit a slight translation in the longitudinal direction.
4. The connection device according to claim 2 or 3, further characterized in that projections (32) are attached onto support (16).

5. The connection device according to claim 4, further characterized in that support (16) comprises an opening (46) level with the contact zone, the edge of opening (46) having an inclined plane downstream and projections (32) are attached on this plane.
6. The connection device according to claim 2 or 3, further characterized in that projections (32) are attached onto conformation means (20).
7. The connection device according to claim 6, further characterized in that conformation means (20) comprise a first set of bent elastic strips (24) and a second set of strips (86) interposed between the strips of the first set whose ends form projections (32) that can be housed in openings (34) of the flex circuit.
8. The connection device according to any one of claims 1 to 7, further characterized in that means (18) for positioning flex circuit (12) relative to support (16) comprises elements positioned upstream of contact zone (14) of flex circuit (12).
9. The connection device according to claim 8, further characterized in that positioning means (18) positioned upstream comprises a projection (52) in one piece with support (16) that can be housed in an opening (54) created in flex circuit (12).
10. The connection device according to any one of claims 1 to 9, further characterized in that conformation means (20) retains and supports flex

circuit (12) against support (16) and for this purpose has means (60) for connection to support (16) by ratcheting.

11. The connection device according to any one of claims 1 to 10, further characterized in that it comprises means (22) for positioning a support of another connection device to which it can be connected.
12. The connection device according to claim 11, further characterized in that support (16) comprises complementary shapes on either side of a roughly median plane assuring the relative positioning of two supports, the two identical supports being positioned head-to-foot.
13. The connection device according to claim 12, further characterized in that support (16) comprises, on one side, a receptacle (38) receiving flex circuit (12) as well as conformation means (20), and, on the other side, a housing (74) that can receive receptacle (38) of a second support when two devices are connected head-to-foot.
14. The connection device according to claim 12, further characterized in that support (16) is presented in the form of a U whose base (90) supports flex circuit (12) as well as conformation means (20) and whose arms (92, 94) have complementary shapes that can assure the relative positioning between supports.

15. The connection device according to any one of claims 12 to 14, further characterized in that the support comprises means for retaining in the connected position.
16. The connection device according to claim 15, further characterized in that the support comprises a projection (83, 112) and a corresponding housing or opening (84, 114), said projection (83, 112) of a first support being able to be immobilized by ratcheting in housing or opening (84, 114) of a second support.
17. The connection device according to claim 11, further characterized in that it comprises a separate element (36) assuring the positioning and holding in position of two connected supports.